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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,695	12/11/2003	Joseph Kuczynski	ROC920030280US1	8669

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IBM CORPORATION, INTELLECTUAL PROPERTY LAW
DEPT 917, BLDG. 006-1
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EXAMINER	
SCHATZ, CHRISTOPHER	
ART UNIT	PAPER NUMBER
1733	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/733,695	KUCZYNSKI, JOSEPH	
	Examiner	Art Unit	
	Christopher T. Schatz	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7,8,13-16,20-25,27 and 28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,8,13-16,20-25,27 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

FINAL REJECTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 7, 8, and 13-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hayashi et al. (WO99/20674*) in view of Subrayan et al.

*For the purposes of this office action, applicant is referred to the English translation of the above cited document, US Patent No. 6,599,954.

Hayashi et al. discloses a method of curing a formulation, comprising: adding a thermal initiator and a photoinitiator to a curable composition to make a formulation; treating the formulation with sufficient radiation having a wavelength between about 220 nm and about 600 nm to generate a first active curing agent from the photoinitiator; and heating the formulation at a temperature sufficient to generate a second active curing agent from the thermal initiator, wherein the first active curing agent and the second active curing agent are both acids or both bases (column 6-8, column 11, lines 22-59). As to the wavelength, applicant is referred to item 8 of Table B, where the reference discloses a wavelength of 238.

In any event, the wavelength used is a function of the desired bond strength and desire radiation time, and one of ordinary skill in the art would have selected wavelength between 220 nm and 600 nm through routine experimentation.

Applicant should also note that it is well known to one of ordinary skill in that art that the photoinitiators (formulas I-VII) and thermal initiators (formulas VIII and IX) disclosed by the reference generate hexafluoroantimonic acid and thus one of ordinary skill in the art would have readily recognized that the both curing agents formed would be identical acids.

Hayashi et al. is silent as to a method wherein the thermal initiator is a quaternary ammonium hexafluoroantimonate. Subrayan et al. discloses a method of curing a formulation by generating a curing agent from a thermal initiator wherein said thermal initiator is a quaternary ammonium hexafluoroantimonate. Subrayan further discloses that a quaternary ammonium hexafluoroantimonate is an advantageous thermal initiator because quaternary ammonium hexafluoroantimonates can be activated at low temperatures and are compatible with a wide range of substrates. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a quaternary ammonium hexafluoroantimonate as the thermal initiator in the method of Hayashi et al. as taught above by Subrayan et al. Using a quaternary ammonium hexafluoroantimonate in Hayashi et al.'s method would create a formulation that requires a low activation temperature and can be used on many different substrates

As to claims 2 and 3 Hayashi et al. discloses a method wherein the heating the formulation cures a part of the formulation that is shielded from the radiation (column 12, lines 36 – column 13, line 35). As to claims 7 and 8, Hayashi et al. discloses a method wherein the photoinitiator is selected from a diazonium salt (column 11, lines 30-33). As to claims 13 and 14,

Hayashi et al. discloses a method wherein the curable composition is an epoxy acrylate composition. As to claims 15 and 16, Hayashi et al. discloses a method wherein the formulation is treated with radiation before and during the heating of the formulation (column 13, lines 25-57).

3. Claims 20-25, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bayer et al. '408.

Bayer et al. discloses a method of forming a connection between an electronic device and an underlying substrate, comprising: placing a formulation between the electronic device and the underlying substrate, the formulation comprising a cationically curable composition, a photoinitiator, and a thermal initiator; treating the formulation with sufficient radiation to generate a first active curing agent; and heating the formulation at a temperature sufficient to generate a second active curing agent from the thermal initiator, wherein the first active curing agent and the second active curing agent are both acids or both bases (column 2, lines 1-65). The reference is silent as to the specific wavelength. Applicant should note that the wavelength used is a function of the desired bond strength and desired radiation time, and one of ordinary skill in the art would have selected wavelength a between 220 nm and 600 nm through routine experimentation.

Applicant should also note that it is well known to one of ordinary skill in that art that the photoinitiator (column 4, lines 50-64) and thermal initiator (column 5, lines 1-15) disclosed by the reference generate hexafluoroantimonic acid and thus one of ordinary skill in the art would have readily recognized that the both curing agents formed would be acids.

Bayer et al. is silent as to a method wherein the thermal initiator is a quaternary ammonium hexafluoroantimonate. Subrayan et al. discloses a method of curing a formulation by generating a curing agent from a thermal initiator wherein said thermal initiator is a quaternary ammonium hexafluoroantimonate. Subrayan further discloses that a quaternary ammonium hexafluoroantimonate is an advantageous thermal initiator because quaternary ammonium hexafluoroantimonates can be activated at low temperatures and are compatible with a wide range of substrates. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a quaternary ammonium hexafluoroantimonate as the thermal initiator in the method of Bayer et al. as taught above by Subrayan et al. Using a quaternary ammonium hexafluoroantimonate in Bayer et al.'s method would create a formulation that requires a low activation temperature and can be used on many different substrates

As to claims 2 and 3 Bayer et al. discloses a method wherein the heating of the formulation cures a part of the formulation that is shielded from the radiation. As to claim 25, Bayer et al. discloses a method wherein the resin is epoxy based. As to claims 27 and 28, Bayer et al. discloses a method wherein discloses a method wherein the formulation is treated with radiation before and during the heating of the formulation.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Just because Hayashi et al. and Bayer et al. disclose a thermal initiator that is not a quaternary ammonium hexafluoroantimonate, it does not mean that using a quaternary ammonium hexafluoroantimonate as a thermal initiator in either method is non-

obvious. Applicant is advised that one cannot show nonobviousness by attacking references individually and in a vacuum of each other as a rejection under 35 U.S.C. 103 is a consideration relating to the combined teachings of the references (and not each reference in a vacuum of the others).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher T. Schatz whose telephone number is 571-272-1456. The examiner can normally be reached on 8:00-5:30, Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher T. Schatz